
Communications Definition

The Communications function of Call Accounting performs the first step in processing CDR data. It collects the data from the Meridian 1 through an optional buffer unit and stores it for processing.

This chapter will describe the tools required to set up communications between the PC and your Meridian 1 and perform data collection. It will also describe any supporting functions which will assist in managing this data.

Communications Database

The Communications Database contains the information necessary to poll and index call data from the Meridian 1 or optional buffer unit to your PC's disk drive for data processing.

To access this database, click on **Communications Database** from the Communications drop-down menu. The Communications Database dialog will appear listing the communications parameters for this site. From this dialog, you can select the SDI port and predefined script filename to be used for connection to this site's Meridian 1.

The remaining fields of this dialog are updated according to the parameters set in the Site Configuration function from MAT Common Services and therefore appear grayed. These are listed for informational purposes. For complete details on entering a site's communications parameters refer to the *MAT Common Services User guide*.

Figure 42
Communications Database dialog

The screenshot shows the 'Communications Database' dialog box. It is divided into several sections. At the top, under the 'SDI' label, there are five radio buttons: SDI1, SDI2, SDI3 (which is selected), SDI4, and File. Below this is a section titled 'M1 Communication Parameters'. This section contains several sub-sections: 'Site Name' with a text field containing 'MDR Telemanagement Ltd.', 'Buffer Type' with a dropdown menu showing 'No buffer', 'Baud Rate' with a group of radio buttons (110, 300, 600, 1200 (selected), 2400, 4800, 9600, 19200), 'Data Bits' with a group of radio buttons (5, 6, 7, 8 (selected)), 'Parity' with a group of radio buttons (None (selected), Odd, Even, Mark, Space), 'Stop Bits' with a group of radio buttons (1 (selected), 1.5, 2), 'Script Type' with a group of radio buttons (Poll (selected), Continuous), and a 'Delay' field with the value '0'. Below these are fields for 'Device' (COM 1, COM 2 (selected), COM 3, COM 4), 'Phone Number', 'PC Modem Type', 'M1 Modem Type', and 'Password'. At the bottom of the dialog, there are fields for 'Filename' and 'Script Name' (which contains 'pollcdr.scr'), and three buttons: 'OK', 'Cancel', and 'Help'.

SDI: The SDI port number is the port on the Meridian 1 from which call data will be collected. When you select an SDI port or File (virtual port) from this option button box, this dialog will list the predefined parameters set for each SDI in the Site Configuration function (from MAT Common Services). If you wish to select a file for data collection, select the File option button and then enter its associated filename in the Filename field.

Collect: Turn on (X) this check box to enable data collection. This will not immediately execute the collection of Call Detail files for this particular site. However, it will inform the system to perform a data collection of this site when the **Data Collection** command is selected. You would normally turn it on except in the following two instances.

- In multiple site configurations, you wish to collect only selected sites.
- You wish to use the Communications Database to index a Call Detail file without having to collect it first.

Index: Indexing links call records that have the same extensions or trunks with those found in the Call Database. This produces faster processing of call record information and is beneficial in generating reports. Turn this check box on (X) to have the program index the raw call data from the Call Detail file 'DETAIL1.DAT' to the Call Database 'MDR1.DAT'. When you run a data collection, the system will initiate this function and format the file into normalized format.

Auto Backup: Turn this check box on (X) to enable the system to create a backup file of data received during a data collection for this site. An exact copy of the Call Detail file is added to this file every time data is collected.

Script Type: Select the type of data collection which will be performed by the selected script file.

Select **Poll** to activate the polling data collection for this site. The system will then be able to collect call records from the Meridian 1 or buffer unit when a data collection is initiated.

Select **Continuous** to signal the system to continuously collect call records from the SMDR port off the Meridian 1 and store these detail records in a temporary file. When you run data collection, the system will collect the call records from this temporary file and, if the Index check box is turned on (X), index them into the database.

Delay: This field contains the numeric value in minutes that the system will delay before beginning the collection process for this site. This count down uses the DOS clock and is therefore machine independent. This feature allows you to take advantage of long distance discount rates when collecting remote locations without having to be there to initiate the collection sequence. For example, enter: **360** in this field to begin collecting data from a site six hours after the record (site) before it.

Filename: If you selected **File** from the SDI Port options, then enter the filename (including the drive and directory) from which data will be collected and processed. This allows you to collect call data from a file (virtual port) in Meridian 1 format. The data collection script can then process this file's CDR data into normalized format. If you do not specify a drive or directory in this field, then the system will use the MAT program directory as the default (e.g., C:\MAT\).

Note: The system can only copy finite files to the Call Detail file. Therefore, ensure that the Continuous option is turned off.

Script Name: In this field, enter the name of the script file which the Data Server will execute as commanded by the Data Supervisor to set up communications with the Meridian 1. The system cannot communicate without a script file. Call Tracking includes a set of default script files which you can select to collect data from your Meridian 1.

M1 communication parameters

The following fields contain the communication parameters as defined for the selected SDI port. These fields appear grayed and cannot be edited. They reflect the data input for this site from the Site Configuration function of MAT Common Services.

Site Name: This field contains the name of the site from which data is being collected (e.g., Company Head Office, Plant, or Remote Office).

Buffer Type: This field lists the type of buffer unit which has collected CDR data from the Meridian 1. When data collection is activated, Call Accounting will collect the call records from this buffer unit.

Baud Rate: This option button box lists the baud rate at which Call Accounting will communicate with the Meridian 1 through its connected modems (110, 300, 600, 1200, 2400, 4800, 9600, 19200).

Data Bits: This option button box lists the data bits required for the modem connection (5, 6, 7, or 8).

Parity: The Parity option button box lists the parity for the modem connection (None, Odd, Even, Mark, or Space).

Stop Bits: This option button box lists the stop bits for this modem connection (1, 1.5, or 2).

Device: The Device fields list the connection parameters for the PC. This includes the PC's port number, the telephone number to be dialed for connection to the Meridian 1, and the type of modem to be used for communications.

Port: The COM port buttons list the number of the PC's port where the modem is connected (COM1, COM2, COM3, or COM4).

Phone Number: This field contains the telephone number which the PC's modem will dial to connect to the modem at the Meridian 1.

PC Modem Type: The PC Modem Type field lists the type of modem at the PC which is being used for communication.

M1 Modem Type: The M1 Modem Type field lists the type of modem at the Meridian 1 which is being used for communication.

Password: If you are using a Dial Back modem, a password is required for it to function properly. Consult your modem manual for the password and enter it in this field.

Once you have completed the set up of the Communications Database, click on the **OK** command button to save these settings and return to the Call Accounting main window.

Data Collection

Data Collection is the process of transferring the call detail data from the Meridian 1 or optional buffer unit to the raw Call Detail file **DETAIL1.DAT** on your system disk. Call Accounting will then index this raw data file and save it to the Call Database **MDR1.DAT** when a data collection option is initiated.

To initiate data collection from the current site's Meridian 1, click on **Data Collection** from the Communications drop-down menu. Call Accounting will then use the parameters as defined in the Site Configuration function from MAT Common Services and listed in the Communications Database to start collecting the call records from the Meridian 1.

As Call Accounting is initiating communications and collecting and indexing the call data, it will display a status dialog of these activities. Use this status dialog to monitor the data collection activity.

Collecting and indexing

Data collection is a two step process. During the first step, the system collects the data from the Meridian 1 through the optional buffer unit and stores it in the raw Call Detail file. The second step involves appending this file into the Call Database.

Step 1: Collect raw data

The first step is the actual data collection from the Meridian 1 or buffer unit to the system's disk drive and finally to the Call Detail file. Call Accounting uses the parameters selected from the Communications Database to initiate this data collection. If the Collect check box is turned on (X) for this site, it will then signal the script file listed in the Script Name field to initiate data collection.

Note: Call Accounting will wait the number of minutes entered in the Delay field before it initiates data collection.

The system now assumes that it has successfully connected to the Meridian 1 or buffer unit. It then attempts to transfer the data from the Meridian 1 or buffer unit to the Call Accounting data file. If the system receives no response or non-recognizable data due to a difficulty in the hardware configuration, it will retry the operation up to ten times before stopping.

If the connection is successful, it will transfer the data to the files belonging to that site. If communication with the Meridian 1 or buffer unit is not successful, the data collection function will retry up to 15 times per record before discontinuing collection.

You can use the number of retries as an indication of the possible time when the system experienced difficulty. A summary of this schedule appears below.

Table 40
Retry schedule

Number of Retries	Reason
5 retries	No connection to remote modem
10 retries	Connection to remote modem, but not to buffer unit
15 retries	Connection to buffer unit, but problems with data transfer
51 retries	Maximum number of retries caused by noise or Windows SmartDrive
—end—	

It is possible to direct output to a second file for backup purposes during data collection. This process is determined by the Auto Backup field found in the Communications Database. If the Auto Backup check box is turned on (X), then Call Accounting will write the data to a second file.

Once the system completes collecting data from the Meridian 1 or buffer unit, it proceeds to Step 2 of the data collection process.

Step 2: Index call records

The second step of the communications process involves indexing the received call records in the Call Detail files. Indexing is necessary to permit the reporting functions to have faster access to the Call Database records. During this process, the system saves the files to a new Call Database file. This process does not take place until all records have been transferred to the hard disk during the first step data collection. Records in the buffer unit are not erased until all the records are successfully transferred.

Note: If you turned off the Index check box in the Communications Database, then the system will NOT index the data. You may wish to prevent Indexing for the moment to save disk space. If you turn the Index check box on, then the system will transfer the call records in the Detail file to a separate file MDR1.DAT and index it.

Once Call Accounting has completed collecting data from this site's Meridian 1, it will save it to the appropriate files (DETAIL1.DAT and MDR1.DAT) and return to the main window. You can now use the database editing and reporting functions to review this call data and generate your reports. Refer to the chapters in this guide on Database Maintenance and Report Generation for complete details on these functions.

Schedule Data Collection

You can set up Call Accounting to collect and index the call detail records from the Meridian 1 by setting up the MAT Common Services Scheduler application. By providing basic information in the initial setup, you can signal Call Accounting to collect and/or index these call records at a scheduled date and time.

To configure Call Accounting to run a data collection, click on **Schedule Data Collection** from the Communications drop-down menu and enter a description and command line for each task in this event. Next, enter the date and time for the initial occurrence of the event, and select an interval for any subsequent occurrences of this event (e.g., every Friday, once a month).

Once you have configured and scheduled this event, the system will save it in its internal scheduling file and collect the data accordingly.